AMENDMENTS TO THE CLAIMS:

Please amend claims as indicated in the attached listing of claims. This listing replaces all prior listing of claims.

1.   (Currently Amended) A method for dynamically establishing an ad-hoc network including a plurality of ~~work~~ machines[[ ]], one or more of which may move within a ~~work~~ environment and each of which includes a gateway, the method performed by a respective gateway included within a respective one of the ~~work~~ machines comprising:

determining a first set of the plurality of ~~work~~ machines that are within direct communication range of the respective ~~work~~ machine based on the respective ~~work~~ machine's current location within the ~~work~~ environment;

determining a second set of the plurality of ~~work~~ machines that are in direct communication range of one or more of the ~~work~~ machines in the first set;

forwarding a packet received from a first ~~work~~ machine included in the first set to a second ~~work~~ machine included in the first set based on a determination that the second ~~work~~ machine is either directly or indirectly within communication range of a third ~~work~~ machine included the second set; and

updating a computer-readable storage device of the ~~work~~ machines included in at least one of the first and second sets of the plurality of ~~work~~ machines based on at least one of (i) the respective ~~work~~ machine changing locations within the ~~work~~ environment and (ii) any of the ~~work~~ machines included in the first or second sets changing locations within the ~~work~~ environment.

2.   (Currently Amended) The method of claim 1, wherein the packet is destined for ~~to~~ a destination ~~work~~ machine not included in the first or second set~~s~~ of the plurality of ~~work~~ machine~~s~~, and forwarding the packet includes:

forwarding the packet to the second ~~work~~ machine based on a determination that the third ~~work~~ machine is in direct communication range of the destination ~~work~~ machine.

3.   (Currently Amended) The method of claim 1, wherein the packet is destined for ~~to~~ a destination ~~work~~ machine not included in the first or second set~~s~~ of the plurality of ~~work~~ machine~~s~~, and forwarding the packet includes:

forwarding the packet to the second ~~work~~ machine based on a determination that the third ~~work~~ machine can indirectly communicate with the destination ~~work~~ machine.

4.   (Currently Amended) The method of claim 1, wherein determining the first set of the plurality of ~~work~~ machines includes:

broadcasting an admission packet;

receiving a response from at least one of the first and second ~~work~~ machines; and

adding at least one of the first and second ~~remote work~~ machines to the first set of the plurality of ~~work~~ machines based on the received response.

5.   (Currently Amended) The method of claim 4, wherein determining [[a]]the second set of the plurality of ~~work~~ machines includes:

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collecting, from the response, an identifier associated with the third ~~work~~ machine; and

adding the third ~~work~~ machine to the second set of the plurality of ~~work~~ machines, wherein the identifier reflects that at least one of the first and second ~~work~~ machines are either directly or indirectly in communication with the third ~~work~~ machine.

6.   (Currently Amended) The method of claim 1, wherein updating the ~~work~~ machines included in the at least one of the first and second set<u>s</u> of the plurality of ~~work~~ machines further includes:

determining that the respective ~~work~~ machine has moved to a first location; and

repeating the determining of the first set of the plurality of ~~work~~ machines when the first location is beyond a certain distance from the current location.

7.   (Currently Amended) The method of claim 1, wherein updating the ~~work~~ machines included in the at least one of the first and second set<u>s</u> of the plurality of ~~work~~ machines further includes:

periodically repeating the step of determining the first set of the plurality of ~~work~~ machines.

8.   (Currently Amended) The method of claim 1, wherein updating the ~~work~~ machines included in the at least one of the first and second set<u>s</u> of the plurality of ~~work~~ machines further includes:

removing from the first set any ~~work~~ machines that are not in direct communication with the respective ~~work~~ machine.

9.   (Currently Amended) The method of claim 8, wherein updating the ~~work~~-machines included in the at least one of the first and second set<u>s</u> of <u>the plurality of</u> ~~work~~-machines further includes:

removing from the second set any ~~work~~-machines that are not in direct communications with any ~~work~~-machines included in the first set.

10.   (Currently Amended) The method of claim 1, wherein the respective ~~work~~-machine is connected to at least two data links capable of transmitting the packet from the respective ~~work~~-machine and forwarding the packet further includes:

selecting one of the at least two data links to forward the packet to the first ~~work~~-machine based on at least one of an availability status of each of the data links, <u>a</u>[[the]] cost of communicating over each data link, a quality of service associated with each data link, a priority of the packet, and a transmission time associated with each data link.

11.   (Currently Amended) The method of claim 1, wherein the packet is destined <u>for</u> ~~to~~ a destination ~~work~~-machine and the respective gateway includes a first network table, and forwarding the packet includes:

forwarding the packet to the second ~~work~~-machine based on a determination that the second ~~work~~-machine is associated with the destination ~~work~~-machine in the first network table.

12.   (Currently Amended) The method of claim 1, wherein the packet is destined <u>for</u> ~~to~~ a destination ~~work~~ machine and the respective gateway includes a first and second network table, and forwarding the packet includes:

forwarding the packet to the second ~~work~~ machine based on a determination that the destination ~~work~~ machine is associated with the third ~~work~~ machine in the second network table and the third ~~work~~ machine is associated with the second ~~work~~ machine in the first network table.

13.   (Currently Amended) A system for dynamically establishing communications between <u>a plurality of</u> ~~work~~ machines, one or more of which may move within a ~~work~~ environment, the system comprising:

a first ~~work~~ machine positioned in a first location within the ~~work~~ environment;

a first gateway included in the first ~~work~~ machine that connects an on-board data link with an off-board data link; and

a network table included in the first gateway that identifies ~~work~~ machines that are either directly or indirectly within communication range of the first ~~work~~ machine, wherein the network table identifies a first set of <u>the plurality of</u> ~~work~~ machines that are within communication range of the first ~~work~~ machine and identifies a second set of <u>the plurality of</u> ~~work~~ machines that are within communication range of any of the ~~work~~ machines in the first set,

wherein the first gateway is configured to:

update the network table based on at least one of (i) the first ~~work~~ machine changing locations within the ~~work~~ environment and (ii) any of the ~~work~~

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machines included in the first or second sets changing locations within the ~~work~~ environment,

receive a packet over the off-board data link from a second ~~work~~ machine included in the first set, wherein the packet identifies a destination ~~work~~ machine,

forward the received packet to a third ~~work~~-machine included in the first set based on a determination that the destination ~~work~~-machine is associated with the third ~~work~~-machine in the network table, and

send information included in the received packet to the on-board data link when the packet identifies the first ~~work~~-machine as the destination ~~work~~-machine.

14.   (Currently Amended) The system of claim 13, wherein the first gateway is configured to update the ~~work~~-machines included in the at least one of the first and second set<u>s</u> of <u>the plurality of</u> ~~work~~-machines identified in the network table based on at least one of (i) the first ~~work~~-machine moving out of communication range of any ~~work~~-machine in the first set, (ii) any one of the ~~work~~-machines included in the first set moving out of communication range of the first ~~work~~-machine, (iii) any one of the ~~work~~-machines in the first set moving out of communication range of any one of the ~~work~~-machines in the second set, and (iv) any of the ~~work~~-machines in the second set moving out of communication range of any one of the ~~work~~-machines in the first set.

15.   (Currently Amended) The system of claim 13, wherein the network table includes a first level table identifying the first and second set of <u>the plurality of</u> ~~work~~-machines and a second level table identifying a third set of <u>the plurality of</u> ~~work~~-

machines that are within communication range of any of the ~~work~~ machines in the second set, and wherein the first gateway is further configured to:

forward the packet to the third ~~work~~ machine based on a determination that the destination ~~work~~ machine is associated with a fourth ~~work~~ machine included in the third set and the third ~~work~~ machine is associated with the fourth ~~work~~ machine in the second level table.

16.   (Currently Amended) The system of claim 13, wherein the first gateway is further configured to:

broadcast an admission packet;

receive a response from at least one of the second and third ~~work~~ machines; and

add at least one of the second and third ~~remote~~ ~~work~~ machines to the first set of <u>the plurality of</u> ~~work~~ machines based on the received response.

17.   (Currently Amended) The system of claim 13, wherein the first gateway is further configured to:

periodically broadcast an admission packet to determine whether the first ~~work~~ machine is within communication range of any of the ~~work~~ machines in the ~~work~~ environment.

18.   (Currently Amended) The system of claim 17, wherein the first gateway is further configured to:

remove a ~~work~~ machine from the first set when the first ~~work~~ machine can no longer directly communicate with that ~~work~~ machine.

19.   (Currently Amended) The system of claim 17, wherein the first gateway is further configured to:

remove a ~~work~~-machine from the second set when the ~~work~~-machine can no longer directly or indirectly communicate with the destination ~~work~~-machine.

20.   (Currently Amended) The system of claim 13, wherein the first ~~work~~-machine is connected to at least two data links capable of transmitting the packet from the first ~~work~~-machine and the first gateway is further configured to:

select one of the at least two data links to forward the packet to the third ~~work~~-machine based on at least one of an availability status of each of the data links, a[[the]] cost of communicating over each data link, a quality of service associated with each data link, a priority of the packet, and a transmission time associated with each data link.

21.   (Currently Amended) The system of claim 13, wherein the first gateway is further configured to:

translate the information included in the received packet to a format compatible with the on-board data link when the packet identifies the first ~~work~~-machine as the destination ~~work~~-machine.

22.   (Currently Amended) The system of claim 13, wherein the third ~~work~~-machine includes a respective gateway that is configured to check a respective network table to identify a fourth ~~work~~-machine that is either directly or indirectly in communication with the destination ~~work~~-machine and forward the packet received from the first ~~work~~-machine to the fourth ~~work~~-machine.

23. (Currently Amended) The system of claim 13, wherein the first gateway is configured to:

trace the network table to determine the association between the third ~~work~~ machine and the destination ~~work~~ machine.

24. (Currently Amended) The system of claim 23, wherein the association between the third ~~work~~ machine and destination ~~work~~ machine includes an intermediate ~~work~~ machine that is in direct communication with the third and destination ~~work~~ machines.

25. (Currently Amended) A gateway included in a first ~~work~~ machine located in a ~~work~~ environment comprising one or more other ~~work~~ machines, each ~~work~~ machine capable of moving within the ~~work~~ environment, the gateway comprising:

a first interface connected to an on-board data link interconnecting one or more on-board modules; and

a second interface connected to one or more off-board data links each capable of being communicatively connected to any of the other machines,

wherein the gateway includes:

means for sending an admission packet over one of the off-board data links, the admission packet including a first identifier associated with the first ~~work~~ machine,

means for determining whether a response to the admission packet is received,

means for updating a network table based on the determination,

wherein the network table includes a second identifier associated with a second

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work-machine that is in communication range of the first work-machine, a third identifier associated with a third machine in communication range of the first machine, and a fourththird identifier associated with a fourththird work-machine that is in communication range of the thirdsecond work-machine, and

means for forwarding a packet received from the second work-machine to the third work-machine based on a determination that the fourththird-network work-machine is identified in the network table.

26.   (Currently Amended) A computer-readable storage device medium including instructions for performing, when executed by a processor, a method for dynamically establishing an ad-hoc network including a plurality of work-machines, one or more of which move within a work-environment and each of which includes a gateway, the method performed by a respective gateway included within a respective one of the work-machines comprising:

determining a first set of the plurality of work-machines that are within direct communication range of the respective work-machine based on the respective work-machine's current location within the work-environment;

determining a second set of the plurality of work-machines that are in direct communication range of one or more of the work-machines in the first set;

forwarding a packet received from a first work-machine included in the first set to a second work-machine included in the first set based on a determination that the second work-machine is either directly or indirectly within communication range of a third work-machine included the second set; and

updating the ~~work~~ machines included in at least one of the first and second set_s_ of <u>the plurality of</u> ~~work~~ machines based on at least one of (i) the respective ~~work~~ machine changing locations within the ~~work~~ environment and (ii) any of the ~~work~~ machines included in the first or second sets changing locations within the ~~work~~ environment.

27.   (Currently Amended) The computer-readable medium of claim 26, wherein the packet is destined <u>for</u> ~~to~~ a destination ~~work~~ machine not included in the first or second set_s_ of <u>the plurality of</u> ~~work~~ machine_s_, and forwarding the packet includes:

forwarding the packet to the second ~~work~~ machine based on a determination that the third ~~work~~ machine is in direct communication range of the destination ~~work~~ machine.

28.   (Currently Amended) The computer-readable medium of claim 26, wherein the packet is destined <u>for</u> ~~to~~ a destination ~~work~~ machine not included in the first or second set_s_ of <u>the plurality of</u> ~~work~~ machine_s_, and forwarding the packet includes:

forwarding the packet to the second ~~work~~ machine based on a determination that the third ~~work~~ machine can indirectly communicate with the destination ~~work~~ machine.

29.   (Currently Amended) The computer-readable medium of claim 26, wherein determining the first set of <u>the plurality of</u> ~~work~~ machines includes:

broadcasting an admission packet;

receiving a response from at least one of the first and second ~~work~~ machines; and

adding at least one of the first and second ~~remote~~ ~~work~~-machines to the first set of_the plurality of_ ~~work~~-machines based on the received response.

30.   (Currently Amended) The computer-readable medium of claim 29, wherein determining the[[a]] second set of_the plurality of_ ~~work~~-machines includes:

collecting, from the response, an identifier associated with the third ~~work~~-machine; and

adding the third ~~work~~-machine to the second set of_the plurality of_ ~~work~~-machines, wherein the identifier reflects that at least one of the first and second ~~work~~-machines are either directly or indirectly in communication with the third ~~work~~-machine.

31.   (Currently Amended) The computer-readable medium of claim 26, wherein updating the ~~work~~-machines included in the at least one of the first and second sets of_the plurality of_ ~~work~~-machines further includes:

determining that the respective ~~work~~-machine has moved to a first location; and

repeating the determining of the first set of_the plurality of_ ~~work~~-machines when the first location is beyond a certain distance from the respective ~~work~~-machine's current location.

32.   (Currently Amended) The computer-readable medium of claim 26, wherein updating the ~~work~~-machines included in the at least one of the first and second sets of_the plurality of_ ~~work~~-machines further includes:

periodically repeating the step of determining the first set of_the plurality of_ ~~work~~-machines.

33.   (Currently Amended) The computer-readable medium of claim 26, wherein updating the ~~work~~ machines included in the at least one of the first and second sets of the plurality of ~~work~~ machines further includes:

removing from the first set any ~~work~~ machines that are not in direct communication with the respective ~~work~~ machine.

34.   (Currently Amended) The computer-readable medium of claim 33, wherein updating the ~~work~~ machines included in [[the]]at least one of the first and second sets of the plurality of ~~work~~ machines further includes:

removing from the second set any ~~work~~ machines that are not in direct communications with any ~~work~~ machines included in the first set.

35.   (Currently Amended) The computer-readable medium of claim 26, wherein the respective ~~work~~ machine is connected to at least two data links capable of transmitting the packet from the respective ~~work~~ machine and forwarding the packet further includes:

selecting one of the at least two data links to forward the packet to the first ~~work~~ machine based on at least one of an availability status of each of the data links, a[[the]] cost of communicating over each data link, a quality of service associated with each data link, a priority of the packet, and a transmission time associated with each data link.

36.   (Currently Amended) The computer-readable medium of claim 26, wherein the packet is destined for ~~to~~ a destination ~~work~~ machine and the respective gateway includes a first network table, and forwarding the packet includes:

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forwarding the packet to the second work-machine based on a

determination that the second work-machine is associated with the destination work-

machine in the first network table.

37.   (Currently Amended) The computer-readable medium of claim 26,

wherein the packet is destined for to-a destination work-machine and the respective

gateway includes a first and second network table, and forwarding the packet includes:

forwarding the packet to the second work-machine based on a

determination that the destination work-machine is associated with the third work-

machine in the second network table and the third work-machine is associated with the

second work-machine in the first network table.

38.   (Currently Amended) A method for dynamically establishing an ad-

hoc network including a plurality of work-machines[[ ]], one or more of which may move

within a work-environment and each of which includes a gateway, the method

performed by a respective gateway included within a respective one of the work-

machines comprising:

determining a first set of the plurality of work-machines that are within

direct communication range of the respective work-machine based on the respective

work-machine's current location within the work-environment;

determining a second set of the plurality of work-machines that are in

direct communication range of one or more of the work-machines in the first set; and

forwarding a packet to a computer-readable storage device of a second

work-machine included in the first set based on a determination that the second work-

machine is either directly or indirectly within communication range of a third work-

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machine included the second set, wherein the packet is either (i) received from a first work-machine included in the first set or (ii) generated within the respective work-machine,

wherein determining the[[a]] first set, determining the[[a]] second set, and forwarding are performed when the respective work-machine is prepared to forward the packet to another work-machine.